

Abstract

Face recognition is one of biometric recognition that uses face so no need to make direct contact with the person who being observed. However the human face has a wide range of characteristics due to changes in lighting, expression, pose, etc.

Laplacianface is a face recognition method that represents the human face on training to obtain a face subspace. This subspace is used for the train data's and test data's projection. This projection called feature extraction that takes the discriminative characteristics of face image. The face image classification is done by comparing the features of face image in the test data and train data.

Test result showed Laplacianface gives 100% on accuration score for the changes in lighting (using CMU PIE Database), 98,33% for the changes in expression (using PICS Database), and 98,33% for the changes in pose (using Pointing '04 Database). Laplacianface also gives the face recognition system performance results better than PCA.

Keywords : *face recognition, Laplacianface, PCA, LPP*